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09/385,386	08/30/1999	DAVID PALSULICH	MICRON.093A/	9084
20995	7590	03/22/2005	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			NGUYEN, KIET TUAN	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2881	

DATE MAILED: 03/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/385,386

Applicant(s)

PALSULICH ET AL.

Examiner

Kiet T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 April 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-49 is/are pending in the application.  
4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 6-49 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 032005.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

Applicant's election without traverse of Group II including claims 6-49 in the reply filed on 02 April 2003 is acknowledged.

Applicant is also requested to cancel the non-elected claims 1-5.

***Objected Informalities***

The disclosure is objected to because of the following informalities:

**In The Claims**

Claim 27, line 3, "in" should be – is --.

Claim 38, line 1, "the act of" should be deleted.

Claim 38, line 2, "tubing" should be – tube --.

Claim 39, line 1, "the act of" should be deleted.

Claim 39, line 2, "tubing" should be – tube --.

Claim 40, line 1, "the act of" should be deleted.

Claim 42, line 1, "the act of" should be deleted.

Claim 43, line 1, "the act of" should be deleted.

Claim 44, line 1, "the act of" should be deleted.

Claim 45, line 1, "the act of" should be deleted.

Appropriate correction is required.

***Rejection Under 35 U.S.C. 112, Second Paragraph***

Claims 22-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites the limitation "the input" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 26 recites the limitation "the first section" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the input" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 31 recites the limitation "the connector tubing" in line 5. There is insufficient antecedent basis for this limitation in the claim.

***Rejection Under 35 U.S.C. 102(b)***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 6-8, 10, 12, 15-19, 22, 25, 27, 36-38, 41-42, 44 and 46-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Jarvis et al. (Handbook of Inductively Couple Plasma Mass Spectrometer, pp. 76-78, 1992).

Jarvis et al. disclose, in fig. 3.15, an ICP-MS apparatus. The apparatus includes a transfer line of a connector for adding a sheathing gas, which is a carrier gas such as hydrogen, Nitrogen, oxygen or argon, to an analyte, at an angle, in a tube connected between a spray chamber and a torch plasma chamber, which is an ionizer.

Claims 6-12, 15-16, 22, 25, 27, 36-38 and 41-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Koga et al. (5,252,827).

Koga et al. (5,252,827) disclose, in figs. 1, 2, 4a and 5a, an ICP-MS apparatus. The apparatus includes a connector 65 for connecting an analyte tube 8 connected to a torch plasma chamber 100, which is an ionizer, and transfer lines for adding carrier gases, such as argon, helium, nitrogen and ammonia (see col. 4, lines 30-35), to the analyte at an angle. A nebulizer chamber and a spray chamber are considered to be inherent in the Koga et al. (5,252,827), since the nebulizer chamber and the spray chamber are well known in every ICP-MS apparatus for vaporizing a sample to be an aerosol and filtering the aerosol (see col. 1, lines 18-64 of Koga et al.; and fig. 1 of Zhu et al. (5,597,467)).

Claims 6-8, 12, 15-17, 22-23, 25, 31-32, 35-36, 41-42 and 46-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Zadgorska et al. (5,315,369).

Zadgorska et al. (5,315,369) disclose, in figs. 1-4, an ICP-AES apparatus. The apparatus includes a mechanical connector, which is a compression fitting, for connecting an analyte tube 1 and a carrier gas tube 5 to provide a carrier gas such as argon (see col. 2, line 18 and col.4, line 31) from a gas source to the analyte in the tube 1 at an angle; and a crucible for vaporizing and spraying aerosol converted by heater 7 from a sample to an ionizer 10.

***Rejection Under 35 U.S.C. 103(a)***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9-11, 13-14, 18-21, 24, 26-30, 33-34, 37-40 and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zadgorska et al. (5,315,369).

Zadgorska et al. (5,315,369) disclose all the features as discussed above except helium as recited in claims 9 and 43; nitrogen as recited in claims 10 and 44; ammonia as recited in claims 11 and 45; Teflon tubing as recited in claim 13; the transfer line having an inner diameter of 5/32 of an inch as recited in claim 14; the connector welded to the transfer tubing as recited in claim 18; the connector fusion-welded to the transfer tubing as recited in claim 19; a nipple as recited in claim 20; a Teflon nipple as recited in claim 21; polytetrafluorethylene tubing as recited in claim 24; perflouroalkoxy (PFA) tubing as recited in claim 26; a second section communicating to the gas line as recited in claim 27; Teflon as recited in claim 28; Teflon (PFA) pipe as recited in claim 29; a 45 degree angle as recited in claims 33 and 39; 30 to 60 degree angle as recited in claims 34 and 40; and means for filtering aerosol as recited in claim 37.

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Using the carrier gas such as helium, nitrogen or ammonia is considered to be obvious variation in design, since it well known in the art to use the carrier gas as helium, nitrogen or ammonia in the ICP-MS apparatus as disclosed in Koga et al. (5,252,827), thus would have been obvious to one skilled in the art to use the helium, nitrogen or ammonia in the Zadgorska et al. (5,315,369) ICP-AES apparatus, as Zadgorska et al. (5,315,369) disclose using the argon gas.

Using the Teflon tubing, polytetrafluorethylene tubing, perflouroalkoxy (PFA) tubing or Teflon (PFA) pipe is considered to be obvious variation in design, since it well known in the art to use Teflon tubing, polytetrafluorethylene tubing, perflouroalkoxy (PFA) tubing or Teflon (PFA) pipe for transferring the carrier gas as disclosed in the specification of this application, thus would have been obvious to one skilled in the art to use the Teflon tubing, polytetrafluorethylene tubing, perflouroalkoxy (PFA) tubing or Teflon (PFA) pipe in the Zadgorska et al. (5,315,369) ICP-AES apparatus for transferring the argon gas.

Using the transfer line having an inner diameter of 5/32 of an inch is also considered to be obvious variation in design, since the size and shape of an element is consisting of sizing and shaping means for the system, thus would have been obvious to one skilled in the art to use the transfer line having an inner diameter of 5/32 of an inch in the Zadgorska et al. (5,315,369) ICP-AES apparatus for transferring the argon gas.

Welding the connector to the transfer tubing is considered to be obvious variation in design, since it well known in the art to weld the connector to the transfer tubing for

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transferring the carrier gas as Zadgorska et al. (5,315,369) disclose using the mechanical connecting means for connecting the connector and the tube to transfer the argon gas, thus would have been obvious to one skilled in the art to weld the connector to the transfer tubing in the Zadgorska et al. (5,315,369) ICP-AES apparatus.

Using the Teflon nipple is also considered to be obvious variation in design, since the size and shape of an element is consisting of sizing and shaping means for the system, thus would have been obvious to one skilled in the art to use the Teflon nipple in the Zadgorska et al. (5,315,369) ICP-AES apparatus for connecting the tube.

Connecting the second section of the connector to the gas line, or the gas line at a 45 degree angle or 30 to 60 degree angle relative to the portion of the tube is also considered to be obvious variation in design, since connecting the second section of the connector to the gas line, or the gas line at a 45 degree angle or 30 to 60 degree angle relative to the portion of the tube and the connecting the connector to the tube as disclosed in the Zadgorska et al. (5,315,369) ICP-AES apparatus have the same results for transferring the argon gas into the analyte in the tube, thus would have been obvious to one skilled in the art to connect the second section of the connector to the gas line, or the gas line at a 45 degree angle or 30 to 60 degree angle relative to the portion of the tube in the Zadgorska et al. (5,315,369) ICP-AES apparatus for transferring the argon gas to the tube.

Filtering the aerosol is considered to be obvious variation in design, since it well known in the art to filter the aerosol in the ICP-MS apparatus as Zhu et al. (5,597,467) disclose in col. 1, lines 58-62, thus would have been obvious to one skilled in the art to



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filter the aerosol in the Zadgorska et al. (5,315,369) ICP-AES apparatus for selectively analyzing the sample.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Nishina et al. (6,474,136) disclose an apparatus for analyzing impurities in gases.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kiet T. Nguyen whose telephone number is 571-272-2479. The examiner can normally be reached on Monday-Friday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R Lee can be reached on 571-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KN

  
KIET T. NGUYEN  
PRIMARY EXAMINER